

InfoTrace Enters *Spamalot*

A major project provides crucial information about improving a new product

By: Larry Turner

(Editor's note: Last year, at this time, we ran a feature on Wybron's InfoTrace system, which looked like it might be a potential game-changer. In the following article, Larry Turner, CEO of Wybron reflects candidly on what was learned about the product from its first major installation. The attached sidebar looks at two new products that take the system forward and may allow for a far greater adoption of InfoTrace.)

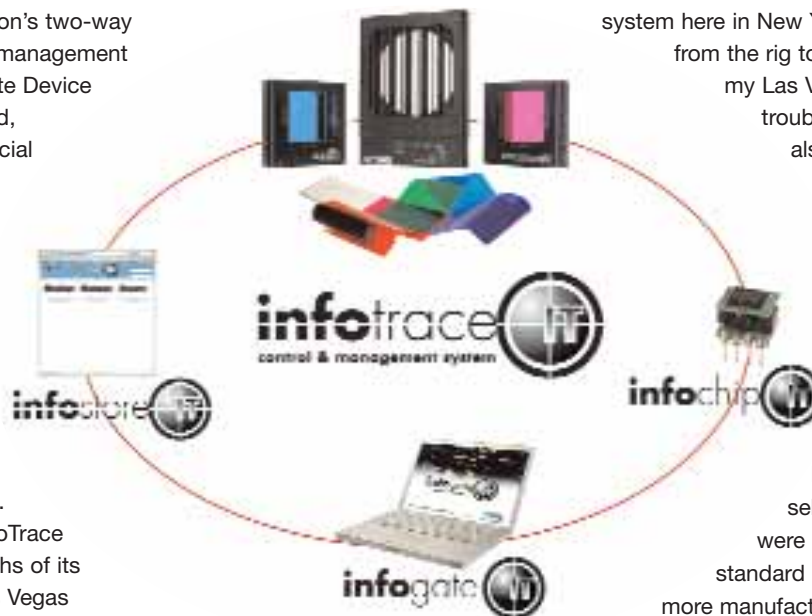
The InfoTrace System, Wybron's two-way communication control and management product based on the Remote Device Management (RDM) standard, made its worldwide commercial debut late last year. It immediately garnered three top awards for most innovative product in 2006. For those of you who haven't seen the InfoTrace System in action, it allows you to find every enabled fixture on the rig, control it, and ensure that it is working.

The first installation of InfoTrace happened within a few months of its introduction, on the new Las Vegas production of the smash-hit Broadway musical *Spamalot*. Although I would like to say everything went flawlessly, the truth is the install did provide excitement for Wybron, along with a number of lessons learned. As an outcome of the experiences and feedback during prep, load-in, and dress rehearsals on the show, we made a number of improvements to the system.

In December 2006, we showed the InfoTrace System to Mike LoBue, the veteran Broadway production electrician, who is working on *Spamalot*. For years, Mike has been asking us at Wybron to develop a system that would tell him the status of the scrollers in his light rigs. InfoTrace proved to be what he was looking for.

Mike planned to install all new equipment in the Grail Theatre, where *Spamalot* is playing. He gave us the green light to install InfoTrace on the production, which was being loaded in, because he had a good relationship with Wybron and felt secure about using the system. Mike recently said, "The InfoTrace System is terrific with the scrollers. It combines some of the best software in the industry with a workable amount of gear at a reasonable price."

Originally, Mike talked to us about running all of the Grail Theatre's lights through the system. "I liked that I could go on the



system here in New York, upload information from the rig to discuss a specific unit with my Las Vegas crew and help them troubleshoot," he said. He was also attracted to the idea that the system managed alerts from any device back to the booth and then off to a website for remote monitoring.

Mike later decided to use the InfoTrace System only with the Coloram IT scrollers, because the lighting fixtures selected for the Grail Theatre were not equipped with industry-standard RDM capabilities. Until more manufacturers embrace the RDM standard and implement the functionality in these fixtures, all the benefits of the system will not be realized.

Along the way, Wybron learned some valuable lessons that we hope will jump-start changes.

The lessons learned

Early in the process, we learned that the theatre already had ETC Net2 nodes installed for lighting control distribution. As we launched it, InfoTrace, was based on a full DMX installation. Therefore, we had to adapt the system to ride on the same Ethernet distribution network.

This original design provided for three DMX universes to be controlled with one of our Gateway interfaces, but, in the Ethernet configuration, we found there were multiple Gateway interfaces on one universe. This was a change from our initial approach and forced us to develop and deliver a system in the new configuration prior to the equipment shipping from PRG's Las Vegas shop to the theatre during the last week of January. We started coding in December to enhance the InfoTrace software to allow the system to reside downstream from the Net2 nodes.

In January, we sent one of our senior engineers to Las Vegas to help Mike implement the InfoTrace System. He worked with

Mike's crew to prep the system at PRG and flash updated software into the color changers and other InfoTrace units as development of the system was being completed in Colorado Springs.

Prior to the load-in, I went out to check on the system in PRG's shop. Mike told me, "Traditionally, the least of my worries are with Wybron products, because I can always set and test the company's products in the shop before we install them into the rig."

During the first couple weeks of February, the system was loaded in, along with an InfoChip that Wybron designed specifically for this installation. This allows basic RDM functionality with legacy products (in this case, the moving lights on the show). However, the show's moving lights were not RDM-ready. On these units, therefore, the InfoChip only allowed for base RDM functionality, such as discovery and lamp hours. Since the moving lights were not RDM-ready, the system would not provide communication of any of the menu diagnostic information from the moving lights.

Mike was disappointed about how little information the moving lights provided, compared to the wealth of data provided by the RDM-ready Coloram IT and CXI IT units on the rig. He made a decision to only use RDM features with the gear designed for RDM.

Lastly, the system functionality is so broad that we discovered that Mike was not able to use the feature to import the show's Lightwright file without a software change. When Keny Whitright, the inventor of InfoTrace, and I visited the theatre in February and found that Mike had a problem identifying from which he was receiving feedback, we knew we had to help Mike import the Lightwright file. He only had "DMX address" as an identifier, which was not helpful in providing quick identification of unit locations. Importing the file automatically provided the electrician with a location and unit number for each unit we were tracking on the system.

Keny and I then started the process of showing Mike how to import the file, save the configuration, and use the added information to identify exactly which unit is replying back with a message. For example, you get a much more detailed identity (1 box boom left unit #19) instead of something more generic, like DMX #154.

A couple of bumps

Once the entire lighting system was installed in the Grail Theatre, we hit a bump on the first night of dress rehearsal. Katie Sieg, Mike's head electrician, lost a set of scrollers during the dress rehearsal. Fortunately, Mike was there; he immediately went up into the grid to look at the failure and quickly realized that InfoGate dropped offline. DMX had stopped passing through the InfoTrace Gateway on that set of scrollers. He solved the problem within five minutes by bypassing the box and running the scrollers straight to the power supply.

Mike later told me, "Because of the InfoTrace System, I knew exactly where to look. But the biggest concern I faced was that the software did not immediately tell Katie something was wrong when InfoGate dropped offline."

We found that we needed to make a minor change to the configuration of the Gateway to eliminate the failure, which would allow the Gateway to kick out the relays on a failure that would bypass all RDM functionality and pass the DMX through to the devices that are connected to it. All units on the rig were updated prior to previews starting in March. They have been working flawlessly ever since.

Katie faced one other bump. Towards the end of the show, confetti cannons are fired, which causes confetti to get caught in some of the color changers. When this happened, Katie used the InfoTrace system to detect the motor error in the booth for the affected units.

Katie and Mike talked about ways to block the confetti. She suggested a screen or mesh, and Mike worked with City Theatrical to quickly design and fabricate the concept. Katie's crew installed the screens over the front of the scrollers to keep the confetti from drifting into them; she reports this is no longer an issue.

Tracking the progress of InfoTrace


Will InfoTrace get us where we want to go? It already has. Now that Katie uses InfoTrace on *Spamalot* Las Vegas' show, she depends on it. "I use InfoTrace mainly for maintenance to see what needs to be done and where any problems might crop up. I can target any issues faster and without as much troubleshooting versus what I have had to do on other shows," Katie shared.

"Also, we have some scrollers that are really hard to reach. It helps to monitor their motors and to ensure they are reading the correct current. I can easily take a channel out, if something happens to one of those scrollers."

The InfoTrace System is giving Katie the feedback she needs. She told me recently, "InfoTrace is a really good system. Everything has been going quite well since that one dress rehearsal."

InfoTrace gives the *Spamalot* Las Vegas crew the information they need, more so now than when we loaded in last February. Mike said, "It is clear to me that there are thousands of techs working on and off Broadway across the country who will benefit from running their lights through the InfoTrace System once other manufacturers implement RDM in their gear."

Wybron designed the InfoTrace System to track every fixture in a theatre, tour, or architectural installation. Our goal is to shorten the time spent troubleshooting and maintaining the rig and to assure lighting effects look as good six months after load-in as on opening night. Thanks to Mike, *Spamalot* Las Vegas was the first installation to create productivity gains and savings in downtime.

Since the *Spamalot* installation, Wybron has sold dozens of InfoTrace Systems, worldwide. Originally, we thought the system would mainly apply to the theatrical marketplace but more and more we are placing it into a variety of venues, including cruise ships, European theatres, sports arenas and architectural applications. We especially have found growing interest in the system from architectural installation clients who use InfoTrace to track the performance of their equipment and plan maintenance. 

What's Next for InfoTrace...

InfoTrace debuted last fall to a great deal of fanfare and acclaim. But one nagging question about it has persisted: How long will it be before there is a critical mass of RDM-ready units in the marketplace that will allow for the widespread adoption of InfoTrace system? Larry Turner, the company's CEO, says, "Many of our products have been designed for the long run." In the case of InfoTrace, just how long is that?

The answer may become clearer with the introduction of two new products that are designed to make InfoTrace easier to use and more accessible to potential customers. The products were seen at the PLASA Show in London in September and will be available for perusal on the trade show floor at LDI, November 16-18, in Orlando. (The folks at Wybron have been busy; in addition to the two new InfoTrace related products, they showed four more items at PLASA, including the Nexera DX CMY color-changing fixture, the DPS-850 distributed dimmer and power supply; Transition Fixed Color, a fiber-optic illuminator that provides white light and has the ability to be fitted with a single MR16-sized dichroic glass filter; and Transition Twinkle Wheel, a CMY fiber-optic illuminator with an integrated twinkle wheel.)

Leading the way with InfoTrace is the Net-IT Gateway, which provides feedback to the InfoTrace system, as well as Ethernet to DMX/RDM conversion. The version shown at PLASA supported Art-Net, which is particularly popular in Europe; soon it will support even more protocols.

The idea of Net-IT Gateway is to allow the functionality of InfoTrace to be available on more control protocols. "The Net-IT Gateway is similar to our current Gateway, with the difference being that the DMX is received via Ethernet, not universe-specific five-pin cables," says Miles Dudgeon, the company's marketing director. "The Net-IT Gateway is a platform Wybron is committed to and will continue to build into the future."

For those who currently use DMX over Ethernet, the unit will receive DMX and act as a node, retransmitting DMX over standard five-pin cable. The Net-IT Gateway will also receive RDM from any lighting fixture over the DMX cable and translate RDM

to Wybron's InfoTrace protocol, allowing for all RDM messages and settings to be changed at a user's PC. Dudgeon adds that, with this product in place, "Gateway will be an option for other popular versions of DMX over Ethernet besides Art-Net and will provide ACN support."

The second new product is Net-IT PS600, a 600W power supply with an integrated Gateway to provide feedback to the InfoTrace system; it also provides Ethernet to DMX/RDM conversion. The key to this product is the integration of the InfoTrace with the power supply: "Mike [LoBue] told us, 'When you add another box, you have the possibility of another failure due to the additional cable connections,'" says Turner. "By combining two functions in one product the system is simplified, and the possibility of transmission error is therefore reduced."

These products are not the first InfoTrace innovations since the system was first premiered. Earlier this year, Wybron introduced the Split IT, a one-in, eight-out RDM/DMX optically isolated splitter/repeater that enables InfoTrace users to run any DMX-controlled lighting devices, such as color changes, moving lights, conventional lights, and dowsers, on the system, allowing for easier installations and remote maintenance and repair. The Split IT can communicate with any product that uses RDM protocol over DMX line; at the moment, many splitters can't handle RDM traffic.

Turner says InfoTrace has begun to find wide acceptance. Aside from *Spamalot*, it has had a major installation on the Royal Caribbean ship *Liberty of the Seas*. He notes that houses of worship have been quick to embrace it. The new IT-related products should make it even more attractive. Still, the full functionality of InfoTrace will not be in use until there are more RDM-ready lighting units in the marketplace.

To help support the industry's efforts to adopt RDM, Wybron is launching a royalty-free license to its RDM responder source code to all manufacturers at LDI. "This software will help the manufacturers speed up their RDM development programs," adds Turner. It remains a fascinating gamble. The early signs are good. Will 2008 prove to be a crucial year for this innovative system? Stay tuned. 